

Abstract of the Disclosure

X-ray imaging screens utilizing phosphors disposed in microchannels disposed in a plate. This application relates to the "tiling" of such microchannel plates to form a
5 larger imaging area and to the use of "storage phosphors" in the microchannel plates which enables the phosphors to be read out after exposure and from the side exposed to the X-rays. The storage phosphor screens of the present invention provide significantly increased resolution than the prior art storage phosphor screens.